

## PATENT ABSTRACTS OF JAPAN

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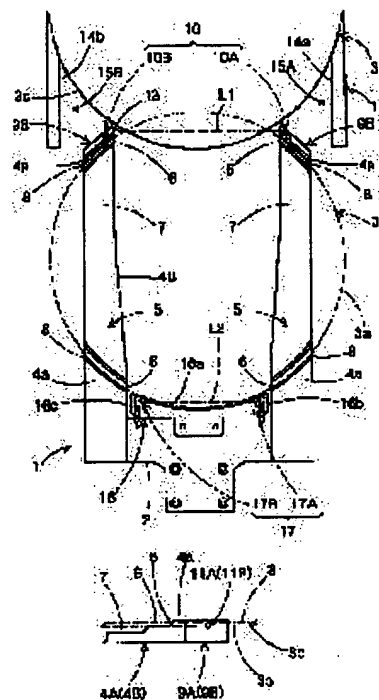
(72)Inventor : KIMATA KAZUO  
INUKAI YASUHIRO

## (54) HAND OF THIN SUBSTRATE TRANSFER ROBOT

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce an installation space, to decrease the number of sensors, and to shorten the line process unit time, etc., by providing a tip end part of a thin substrate transfer robot hand with an optical mapping/seating confirmation shared sensor, which acts both as an optical mapping sensor and as optical seating confirmation sensor.

**SOLUTION:** Related to a hand 1, a tip end part of an expansion arm is connected to a base part 2, and a pair of, left and right, holding plates 4A and 4B of drop-in-type which hold a discoidal substrate 3 are held at the base part 2. A pair of, left and right, sensor holding parts 9A and 9B are provided at the tip end part of each of holding plate parts 4A and 4B, and the sensor holding parts 9A and 9B hold an optical mapping/seating confirmation shared sensor 10 which acts both as an optical mapping sensor for detecting the presence of the discoidal thin substrate 3 and as an optical seating confirmation sensor for confirming that the discoidal thin substrate 3 is placed on the hand 1.



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## CLAIMS

## [Claim(s)]

[Claim 1] The periphery of T typeface piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, is set to a bonnet and the bend insulation cover which covered the outside of these T typeface cylinder objects with the heat insulation tarpaulin further with T typeface cylinder object which consists of heat insulators, such as styrene foam. Said T typeface cylinder object has the structure which divided into two equally T typeface cylinder object which consists of heat insulators, such as styrene foam, in the lengthwise direction, and it to the half-segmented object which carried out the division-into-equal-parts rate Heights and a crevice are established in each plane of composition, and it is formed by combining by fitting of the heights of half-segmented objects, and a crevice. Said heat insulation tarpaulin It has the vertical extension which formed the horizontal pipe of T typeface cylinder object for a long time than wrap die length up and down. And it consists of band-like chlorination plastic sheeting which has the horizontal extension formed for a long time than the periphery length of T typeface cylinder object up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin at five places, and the first double faced adhesive tape is stuck on the one side edge of a heat insulation tarpaulin along with opening of the vertical pipe of T typeface cylinder object the first. The second is stuck so that closing motion of both half-segmented objects may be attained in the joint location of the horizontal pipe to which half-segmented objects are joined and the second double faced adhesive tape may start both half-segmented objects. The third has stuck the third double faced adhesive tape along with opening of the vertical pipe of the half-segmented object of another side. It is the bend insulation cover characterized by for the fourth having stuck the fourth double faced adhesive tape along the edge of the vertical extension of a heat insulation tarpaulin furthermore, and the fifth having stuck the fifth double faced adhesive tape along with the side edge of the horizontal extension of a heat insulation tarpaulin further.

[Claim 2] The periphery of elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe It sets to a bonnet and the bend insulation cover which covered the outside of this elbow form cylinder object with heat insulation tarpaulins, such as chlorination plastic sheeting, further with the elbow form cylinder object which consists of heat insulators, such as styrene foam. Said elbow form cylinder object has the structure which divided into two equally the elbow form cylinder object which consists of heat insulators, such as styrene foam, in the lengthwise direction, and it to the half-segmented object which carried out the division-into-equal-parts rate The protruding line section and the concave streak section are prepared in each plane of composition, and it is formed by combining by fitting of the protruding line section of half-segmented objects, and the concave streak section. Said heat insulation tarpaulin It is prepared in each of a half-segmented object. The heat insulation tarpaulin of one half-segmented object It consists of band-like chlorination plastic sheeting which has the vertical extension made longer than the die length of a half-segmented object up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin at three places, and the first double faced adhesive tape is stuck along with the inside corner of one half-segmented object the first. The second has stuck the second double faced adhesive tape along the outside curved surface of a half-segmented object, and the third has stuck the third double faced adhesive tape along the edge of a vertical extension. The heat insulation tarpaulin of the half-segmented object of another side It has the vertical extension made longer than the die length of a half-segmented object up and down. A horizontal extension longer than the perimeter die length of the outside curved surface of a half-segmented object, It consists of band-like chlorination plastic sheeting which has a horizontal extension longer than the perimeter die length of the inside corner of a half-segmented object. The double faced adhesive tape is stuck on this heat insulation tarpaulin at four places, and the first double faced adhesive tape is stuck along with the inside corner of the half-segmented object of another side the first. It is the bend insulation cover characterized by for the second having stuck the second double faced adhesive tape along the outside curved surface of a half-segmented object, for the third having stuck the third double faced adhesive tape along the edge of a vertical extension, and the fourth having stuck the fifth double faced adhesive tape along with the side edge of a

horizontal extension.

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DETAILED DESCRIPTION

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## [Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the bend insulation cover which carries out the sheathing coat of the bending piping, such as thermal feed tubing for air conditioning, for incubation at piping lists, such as a water pipe and a hot-water pipe.

[0002]

[Description of the Prior Art] Although the peripheral face of piping is conventionally covered with foaming heat insulators, such as styrene foam, since lowering of heat retaining property, the corrosion of a piping outside surface, destruction of the foaming heat insulator by freezing, etc. will arise if moisture and hygroscopic moisture advance into it, in order to prevent penetration of the moisture of storm sewage etc., or the hygroscopic moisture in air on the outside of a foaming heat insulator, the water proof vapor barrier has been given. As this well-known technique, bend cylinder objects, such as a foaming heat insulator which carried out vertical division, are assigned to the outside of bend piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, it twists around it with a low carbon steel wire, a bend cylinder object is fixed to it, and winding and giving water proof hemp cloth further and applying an asphalt primer are performed on it in the polyethylene film on that outside. However, it is difficult for this well-known technique to take remarkable skill to apply this asphalt primer, to secure uniform thickness, and to secure a positive water proof paint film, and it makes coat work to piping complicated.

[0003]

[Problem(s) to be Solved by the Invention] In order to solve the above-mentioned technical problem, the bend insulation cover of this invention aims at covering simply and certainly, without requiring advanced skill in a construction site.

[0004]

[Means for Solving the Problem] The bend insulation cover of this invention therefore, the periphery of T typeface piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe It sets to a bonnet and the bend insulation cover which covered the outside of these T typeface cylinder objects with the heat insulation tarpaulin further with T typeface cylinder object which consists of heat insulators, such as styrene foam. Said T typeface cylinder object Have the structure which divided into two equally T typeface cylinder object which consists of heat insulators, such as styrene foam, in the lengthwise direction, and to the half-segmented object which carried out the division-into-equal-parts rate Heights and a crevice are established in each plane of composition, and it is formed by combining by fitting of the heights of half-segmented objects, and a crevice. Said heat insulation tarpaulin It has the vertical extension which formed the horizontal pipe of T typeface cylinder object for a long time than wrap die length up and down. And it consists of band-like chlorination plastic sheeting which has the horizontal extension formed for a long time than the periphery length of T typeface cylinder object up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin at five places, and the first double faced adhesive tape is stuck on the one side edge of a heat insulation tarpaulin along with opening of the vertical pipe of T typeface cylinder object the first. The second is stuck so that closing motion of both half-segmented objects may be attained in the joint location of the horizontal pipe to which half-segmented objects are joined and the second double faced adhesive tape may start both half-segmented objects. The third has stuck the third double faced adhesive tape along with opening of the vertical pipe of the half-segmented object of another side. Furthermore, the fourth has stuck the fourth double faced adhesive tape along the edge of the vertical extension of a heat insulation tarpaulin, and the fifth has stuck the fifth double faced adhesive tape along with the side edge of the horizontal extension of a heat insulation tarpaulin further. The bend insulation cover of this invention furthermore, the periphery of elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe It sets to a bonnet and the bend insulation cover which covered the outside of this

elbow form cylinder object with heat insulation tarpaulins, such as chlorination plastic sheeting, further with the elbow form cylinder object which consists of heat insulators, such as styrene foam. Said elbow form cylinder object has the structure which divided into two equally the elbow form cylinder object which consists of heat insulators, such as styrene foam, in the lengthwise direction, and it to the half-segmented object which carried out the division-into-equal-parts rate The protruding line section and the concave streak section are prepared in each plane of composition, and it is formed by combining by fitting of the protruding line section of half-segmented objects, and the concave streak section. Said heat insulation tarpaulin It is prepared in a half-segmented object, respectively. The heat insulation tarpaulin of one half-segmented object It consists of band-like chlorination plastic sheeting which has the vertical extension made longer than the die length of a half-segmented object up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin at three places, and the first double faced adhesive tape is stuck along with the inside corner of one half-segmented object the first. The second has stuck the second double faced adhesive tape along the outside curved surface of a half-segmented object, and the third has stuck the third double faced adhesive tape along the edge of a vertical extension. The heat insulation tarpaulin of the half-segmented object of another side It has the vertical extension made longer than the die length of a half-segmented object up and down. A horizontal extension longer than the perimeter die length of the outside curved surface of a half-segmented object, It consists of band-like chlorination plastic sheeting which has a horizontal extension longer than the perimeter die length of the inside corner of a half-segmented object. The double faced adhesive tape is stuck on this heat insulation tarpaulin at four places, and the first double faced adhesive tape is stuck along with the inside corner of the half-segmented object of another side the first. The second has stuck the second double faced adhesive tape along the outside curved surface of a half-segmented object, the third has stuck the third double faced adhesive tape along the edge of a vertical extension, and the fourth has stuck the fifth double faced adhesive tape along with the side edge of a horizontal extension.

[0005]

[Embodiment of the Invention] Temporary adhesion is beforehand performed using the double faced adhesive tape of a heat insulation tarpaulin which has the half-segmented object which consists of heat insulators, such as styrene foam, at works etc., and an extension, and the bend insulation cover is prepared. In a construction site, where a half-segmented object is opened, bending piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, is inserted, and a heat insulator cylinder object is covered by the peripheral face of bending piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, by closing a half-segmented object. And vinyl-chloride-resin system adhesives are applied to the whole surface so that the non-exfoliated double faced adhesive tape of an extension may be surrounded, the releasing paper of a non-exfoliated double faced adhesive tape is removed, and it sticks on the front face of the heat insulation tarpaulin by the side of the heat insulator cylinder outside of the body with vinyl-chloride-resin system adhesives. By repeating such an activity, bending piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, can be covered with a bend insulation cover.

[0006]

[Example] Hereafter, the first example of this invention is explained based on an accompanying drawing. The bend insulation covers of the first example are a bonnet and a thing which covers the outside of these T typeface cylinder objects 1 with the heat insulation tarpaulins 2, such as chlorination plastic sheeting, further with T typeface cylinder object 1 which consists the periphery of T typeface piping (cheese-head form piping), such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, of heat insulators, such as styrene foam, as shown in drawing 1.

[0007] As said T typeface cylinder object 1 was shown in drawing 2, while had and carried out the division-into-equal-parts rate of the structure which divided into two equally T typeface cylinder object 1 which consists of heat insulators, such as styrene foam, in the lengthwise direction. To a half-segmented object 3 Form the protruding line section 8 and the concave streak section 9 in the plane of composition 4 of a vertical tubeside in heights 6, a crevice 7, and the plane of composition 5 of a level tubeside, and to the half-segmented object 10 of another side which carried out the division-into-equal-parts rate The protruding line section 15 and the concave streak section 16 are formed in the plane of composition 11 of a vertical tubeside in heights 13, a crevice 14, and the plane of composition 12 of a level tubeside. T typeface cylinder object 1 is completed by combining by fitting of the heights 6 of a half-segmented object 3, the crevice 14 of a half-segmented object 10 and the crevice 7 of a half-segmented object 3, the heights 13 of a half-segmented object 10 and the protruding line section 8 of a half-segmented object 3 and the concave streak section 16 of a half-segmented object 10, and the concave streak section 9 of a half-segmented object 3 and the protruding line section 15 of a half-segmented object 10. furthermore, to opening of the vertical tubeside of said half-segmented objects 3 and 10, and a level tubeside When it considers as T typeface cylinder object 1 by fitting of the half-segmented object 3 divided by forming the concave step 17 along with the inner circumference side of an end face, and ten comrades, as

shown in drawing 1 Fitting of the convex step 19 of the straight compound cylinder object 18 and the concave step 17 of T typeface cylinder object 1 can be carried out, and the straight compound cylinder object 18 can be connected now. In addition, these people's piping insulation cover (Japanese Patent Application No. No. 225140 [ 11 to ]) can be used for the above-mentioned straight compound cylinder object 18.

[0008] As said heat insulation tarpaulin 2 is shown in drawing 3 , it has the horizontal extensions 20 and 20 formed for a long time than the periphery length of T typeface cylinder object 1 at a vertical edge. And it consists of band-like chlorination plastic sheeting which has the vertical extensions 21 and 21 made longer than the die length of the horizontal pipe of T typeface cylinder object 1 up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin 2 at five places, and the first double faced adhesive tape 23 is stuck along with the opening 22 of the vertical tubeside of one half-segmented object 3 the first. The second is stuck so that closing motion of both the half-segmented objects 3 and 10 may be attained in the joint location of a level tubeside where a half-segmented object 3 and ten comrades are joined and the second double faced adhesive tape 24 may start both both half-segmented objects 3 and 10. The third has stuck the third double faced adhesive tape 25 along with the opening 22 of the vertical tubeside of the half-segmented object 10 of another side. Furthermore, the fourth has stuck the fourth double faced adhesive tape 26 and 26 along the edge of the vertical extensions 21 and 21 of the heat insulation tarpaulin 2, and the fifth has stuck the fifth double faced adhesive tape 27 and 27 along with the side edge of the horizontal extensions 20 and 20 of the heat insulation tarpaulin 2 further. The first double faced adhesive tape 23 of the above, the second double faced adhesive tape 24, and the third double faced adhesive tape 25 aim at eye tacking of T typeface cylinder object 1 and the heat insulation tarpaulin 2, remove the releasing paper of the fourth double faced adhesive tape 26 and the fifth double faced adhesive tape 27 at the time of the construction to bending piping, and carry out temporary immobilization of the T typeface cylinder object 1 at bending piping. In addition, the space of fourth double-faced-adhesive-tape [ of the heat insulation tarpaulin 2 ] 26 and fifth double-faced-adhesive-tape 27 perimeter is a part for giving vinylchloride resin system adhesives and carrying out actual adhesion at the time of the construction to bending piping.

[0009] Next, if the construction approach of the bend insulation cover of the first example of this invention is described, a double faced adhesive tape will perform temporary adhesion for the half-segmented objects 3 and 10 and the heat insulation tarpaulin 2 which consist of a heat insulator at works etc. beforehand, and the bend insulation cover will be prepared. that is By fitting of the heights 6 of the divided half-segmented object 3 and the half-segmented object 3 of ten comrades, the crevice 14 of a half-segmented object 10 and the crevice 7 of a half-segmented object 3, the heights 13 of a half-segmented object 10 and the protruding line section 8 of a half-segmented object 3 and the concave streak section 16 of a half-segmented object 10, and the concave streak section 9 of a half-segmented object 3 and the protruding line section 15 of a half-segmented object 10 By combining, form T typeface cylinder object 1, and next, remove the releasing paper of the first double faced adhesive tape 23 of the heat insulation tarpaulin 2 on these T typeface cylinder objects 1, and the first double faced adhesive tape 23 is stuck on them along with the opening 22 of the vertical tubeside of one half-segmented object 3. Next along with the peripheral face of T typeface cylinder object 1, wind the heat insulation tarpaulin 2, remove the releasing paper of the second double faced adhesive tape 24, and the second double faced adhesive tape 24 is stuck on a part for the joint of the level tubeside of both the half-segmented objects 3 and 10 ranging over both the half-segmented objects 3 and 10. Furthermore along with the peripheral face of T typeface cylinder object 1, the heat insulation tarpaulin 2 is wound, the releasing paper of the third double faced adhesive tape 25 is removed, and the third double faced adhesive tape 25 is stuck along with the opening 22 of the vertical tubeside of the half-segmented object 10 of another side. As by carrying out like this shows to drawing 3 , while T typeface cylinder object 1 is covered with the heat insulation tarpaulin 2, the second double faced adhesive tape 24 can make the role of a hinge, and it can open [ both the half-segmented objects 3 and 10 ] a peripheral face and close in the condition of having been covered with the heat insulation tarpaulin 2. In addition, the fourth double faced adhesive tape 26 of the vertical extension 21 and the fifth double faced adhesive tape 27 of the horizontal extension 20 are left as it is in the condition [ having attached the releasing paper ] till piping installation. Such temporary adhesion is performed and the bend insulation cover is prepared.

[0010] In a construction site, as shown in drawing 3 , where half-segmented objects 3 and 10 are opened, T typeface piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, is inserted, and T typeface cylinder object 1 is covered by the peripheral face of T typeface piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, by closing half-segmented objects 3 and 10. When it considers as T typeface cylinder object 1 by fitting of a half-segmented object 3 and ten comrades at it and coincidence, as shown in drawing 1 Fitting of the convex step 19 of the straight compound cylinder object 18 and the concave step 17 of T typeface cylinder object 1 is carried out. After connecting the straight compound cylinder object 18 to the level tubeside of T typeface cylinder object 1, vinyl-chloride-resin system adhesives are applied to the part on which the fourth double

faced adhesive tape 26 of the vertical extension 21 and the fifth double faced adhesive tape 27 of the horizontal extension 20 are not stuck. While removing the releasing paper of the fourth double faced adhesive tape 26 and the fifth double faced adhesive tape 27 next and sticking the up-and-down horizontal extensions 20 and 20 on the front face of the heat insulation tarpaulin 2 of opening 22 outside of the vertical tubeside of T typeface cylinder object 1 with vinyl-chloride-resin system adhesives The vertical extensions 21 and 21 are similarly stuck on the peripheral face of the straight compound cylinder object 18. In addition, the fourth double faced adhesive tape 26 and the fifth double faced adhesive tape 27 are the objects for [ for holding until vinyl-chloride-resin system adhesives carry out desiccation solidification / tacking ]. Thus, T typeface piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, can be covered with a bend insulation cover.

[0011] Next, the second example of this invention is explained based on an accompanying drawing. The bend insulation covers of the second example are a bonnet and a thing which covers the outside of this elbow form cylinder object 28 with the heat insulation tarpaulins 29, such as chlorination plastic sheeting, further with the elbow form cylinder object 28 which consists the periphery of elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, of heat insulators, such as styrene foam, as shown in drawing 4 .

[0012] As said elbow form cylinder object 28 was shown in drawing 5 , while had and carried out the division-into-equal-parts rate of the structure which divided into two equally the elbow form cylinder object 28 which consists of heat insulators, such as styrene foam, in the lengthwise direction. To a half-segmented object 30 Form the protruding line section 32 and the concave streak section 33 in the plane of composition 31 of an outside curved surface, make the plane of composition 34 of an inside corner into a flat side, and to the half-segmented object 35 of another side which carried out the division-into-equal-parts rate Form the protruding line section 37 and the concave streak section 38 in the plane of composition 36 of an outside curved surface, and the plane of composition 39 of an inside corner is made into a flat side. The elbow form cylinder object 28 is completed by combining by fitting of the protruding line section 32 of a half-segmented object 30, the concave streak section 38 of a half-segmented object 35 and the concave streak section 33 of a half-segmented object 30, and the protruding line section 37 of a half-segmented object 35. Furthermore, when it considers as the elbow form cylinder object 28 by fitting of a half-segmented object 30 and 35 comrades by forming the concave step 17 along with the inner circumference side of an end face, as shown in drawing 4 , fitting of the convex step 19 of the straight compound cylinder object 18 and the concave step 17 of the elbow form cylinder object 28 can be carried out to piping opening of said half-segmented objects 30 and 35, and the straight compound cylinder object 18 can be connected to it. In addition, these people's piping insulation cover (Japanese Patent Application No. No. 225140 [ 11 to ] ) can be used for the above-mentioned straight compound cylinder object 18.

[0013] Said heat insulation tarpaulin 29 is provided in each of half-segmented objects 30 and 35 as shown in drawing 6 . The heat insulation tarpaulin 29 of one half-segmented object 30 It consists of band-like chlorination plastic sheeting which has the vertical extensions 40 and 40 made longer than the die length of a half-segmented object 30 up and down. The double faced adhesive tape is stuck on this heat insulation tarpaulin 29 at three places. The first, along with the inside corner of one half-segmented object 30, the first double faced adhesive tape 41 is stuck, the second has stuck the second double faced adhesive tape 42 along the outside curved surface of a half-segmented object 30, and the third has stuck the third double faced adhesive tape 43 and 43 along the edge of the vertical extensions 40 and 40. The first double faced adhesive tape 41 of the above and the second double faced adhesive tape 42 aim at eye tacking of the elbow form cylinder object 28 and the heat insulation tarpaulin 29, remove the releasing paper of the third double faced adhesive tape 43 at the time of the construction to elbow form piping, and carry out temporary immobilization of the elbow form cylinder object 28 at elbow form piping. In addition, the space around [ third double-faced-adhesive-tape 43 ] the vertical extension 40 of the heat insulation tarpaulin 29 is a part for giving vinylchloride resin system adhesives and carrying out actual adhesion at the time of construction.

[0014] The heat insulation tarpaulin 29 of the half-segmented object 35 of another side has the vertical extensions 44 and 44 made longer than the die length of a half-segmented object 35 up and down. It consists of band-like chlorination plastic sheeting which has the long horizontal extension 46. the outside curved surface of a half-segmented object 35 -- a boundary-length halfbeak -- the long horizontal extension 45 and the inside corner of a half-segmented object 35 -- a boundary-length halfbeak -- The double faced adhesive tape is stuck on this heat insulation tarpaulin 29 at four places. Along with the inside corner of the half-segmented object 35 of another side, the first double faced adhesive tape 47 is stuck the first. The second has stuck the second double faced adhesive tape 48 along the outside curved surface of a half-segmented object 35, the third has stuck the third double faced adhesive tape 49 and 49 along the edge of the vertical extensions 44 and 44, and the fourth has stuck the fifth double faced adhesive tape 50 and 50 along with the side edge of the horizontal extensions 45 and 46. The first double faced adhesive tape 47 of the above and the second double faced adhesive tape 48 aim at eye tacking of the elbow form cylinder object 28 and the heat insulation tarpaulin 29,



remove the releasing paper of the third double faced adhesive tape 49 and the fourth double faced adhesive tape 50 at the time of the construction to elbow form piping, and carry out temporary immobilization of the elbow form cylinder object 28 at elbow form piping. In addition, the third double faced adhesive tape 49 of the vertical extensions 44 and 44 of the heat insulation tarpaulin 29 and the fourth double faced adhesive tape 50 of the horizontal extensions 45 and 46, and the space of 50 perimeters are the parts for giving vinylchloride resin system adhesives and carrying out actual adhesion at the time of construction.

[0015] Next, if the construction approach of the bend insulation cover of the second example of this invention is described, a double faced adhesive tape will perform temporary adhesion for the half-segmented objects 30 and 35 and the heat insulation tarpaulin 29 which consist of a heat insulator at works etc. beforehand, and the bend insulation cover will be prepared. Namely, remove the releasing paper of the first double faced adhesive tape 41 of the heat insulation tarpaulin 29 to one half-segmented object 30, and the first double faced adhesive tape 41 is stuck on it along with one half-segmented object 30 inside corner. Next remove the releasing paper of the second double faced adhesive tape 42, and the second double faced adhesive tape 42 is stuck along the outside curved surface of a half-segmented object 30. Furthermore the releasing paper of the first double faced adhesive tape 47 of the half-segmented object 35 of another side is removed, along with the inside corner of the half-segmented object 35 of another side, the first double faced adhesive tape 47 is stuck, then the releasing paper of the second double faced adhesive tape 48 is removed, and the second double faced adhesive tape 48 is stuck along the outside curved surface of a half-segmented object 35. In addition, the third double faced adhesive tape 43 and 43 of the vertical extensions 40 and 40 of one half-segmented object 30, the third double faced adhesive tape 49 and 49 of the vertical extensions 44 and 44 of the half-segmented object 35 of another side, and the fourth double faced adhesive tape 50 and 50 of the horizontal extensions 45 and 46 are left as it is in the condition [ having attached the releasing paper ] till piping installation. Such temporary adhesion is performed and the bend insulation cover is prepared.

[0016] In a construction site, as shown in drawing 6 , elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, is inserted from the condition which opened half-segmented objects 30 and 35, and the elbow form cylinder object 28 is covered by the peripheral face of elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, by closing half-segmented objects 30 and 35. When it considers as the elbow form cylinder object 28 by fitting of a half-segmented object 30 and 35 comrades at it and coincidence, as shown in drawing 1 Fitting of the convex step 19 of the straight compound cylinder object 18 and the concave step 17 of the elbow form cylinder object 28 is carried out. After connecting the straight compound cylinder object 18 to the elbow form cylinder object 28, Into the part on which the third double faced adhesive tape 43 and 43 of the vertical extensions 40 and 40 of one half-segmented object 30, the third double faced adhesive tape 49 and 49 of the vertical extensions 44 and 44 of the half-segmented object 35 of another side, and the fourth double faced adhesive tape 50 and 50 of the horizontal extensions 45 and 46 are not stuck, vinyl-chloride-resin system adhesives While applying, removing the releasing paper of the third double faced adhesive tape 43 and 49 and sticking on the front face of heat insulation water proof C 2 of the outside of the elbow form cylinder object 28 with vinyl-chloride-resin system adhesives The releasing paper of the fourth double faced adhesive tape 50 and 50 of the horizontal extensions 45 and 46 is removed, and where the front face of the heat insulation tarpaulin 29 of the outside of an elbow form cylinder object is overlapped with vinyl-chloride-resin system adhesives, it sticks. In addition, the third double faced adhesive tape 43 and 43 of the vertical extensions 40 and 40 of one half-segmented object 30, the third double faced adhesive tape 49 and 49 of the vertical extensions 44 and 44 of the half-segmented object 35 of another side, and the fourth double faced adhesive tape 50 and 50 of the horizontal extensions 45 and 46 are the objects for [ for holding until vinyl-chloride-resin system adhesives carry out desiccation solidification / tacking ]. Thus, elbow form piping, such as thermal feed tubing for air conditioning, such as a water pipe and a hot-water pipe, can be covered with a bend insulation cover.

[0017]

[Effect] Thus, since temporary adhesion of the heat insulation tarpaulin is carried out beforehand at T typeface cylinder object or the elbow form cylinder object, the bend insulation cover of this invention is easy to construct, and does not need skill. Moreover, since waterproofness is excellent, the bend insulation cover of this invention can maintain a heat insulation effect, and can prevent the corrosion of bend piping. Furthermore, since the bend insulation cover of this invention can carry out works production, it can aim at equalization of a product, and compaction of a construction period.

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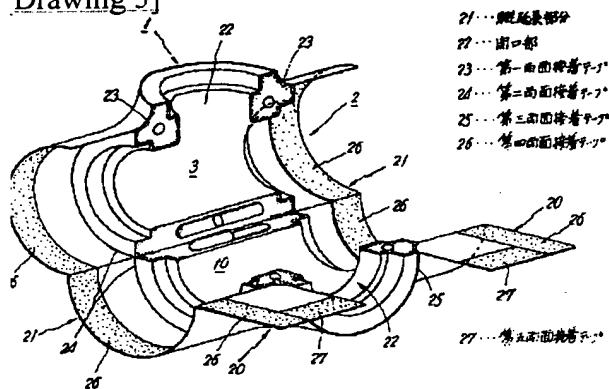
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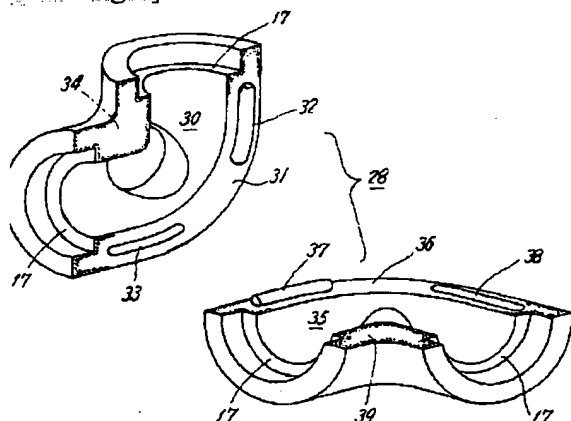
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## DRAWINGS

[Drawing 3]

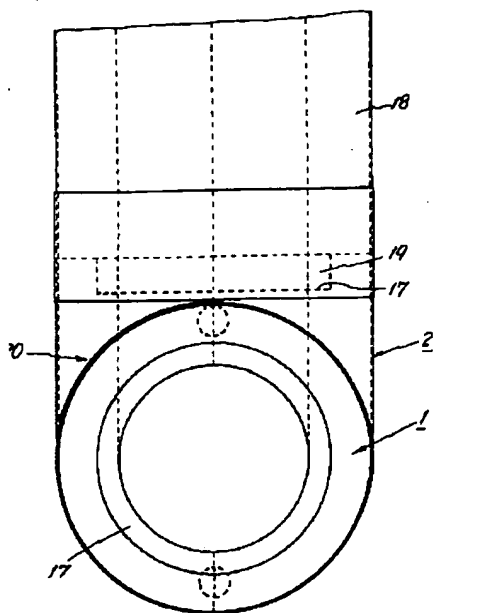


[Drawing 5]



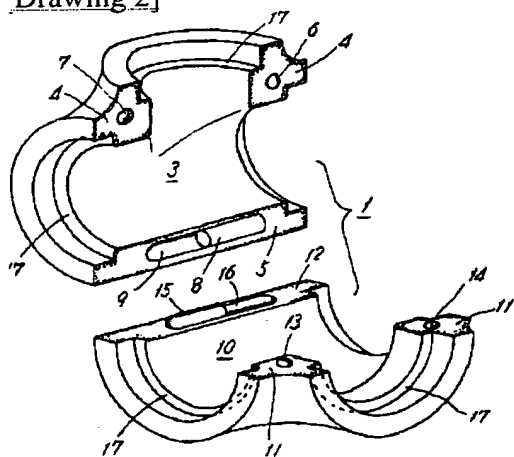
30... 半割体	35... 半割体
32... 凸条部	37... 凸条部
33... 凹条部	38... 凹条部

[Drawing 1]



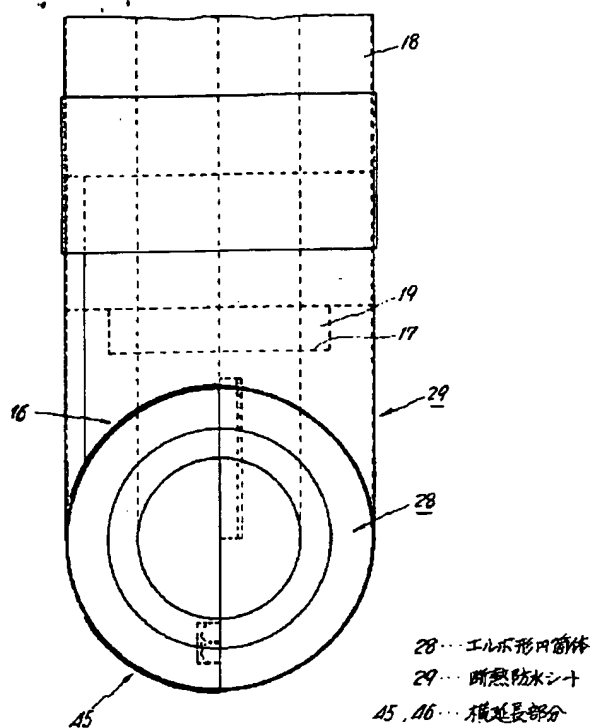
- 1...T字形筒体
- 2...断熱防水シート
- 17...凹状段部
- 18...直形筒体
- 19...凸状段部
- 20...横延長部分

[Drawing 2]

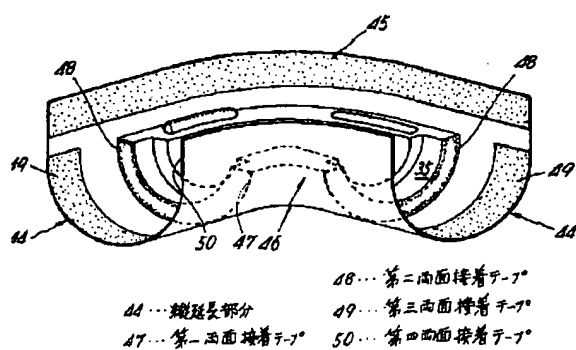
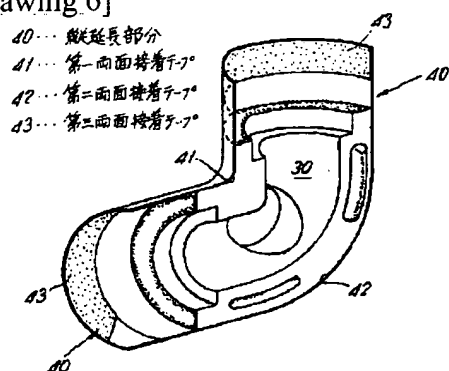


- 3...半割体
- 6...凸部
- 7...凹部
- 8...凸条部
- 9...凹条部
- 10...半割体
- 13...凸部
- 14...凹部
- 15...凸条部
- 16...凹条部

[Drawing 4]



[Drawing 6]



[Translation done.]